



## THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION  
100 CAMBRIDGE STREET, BOSTON MA 02114

---

### **Meeting Minutes for October 14, 2004**

#### **Members in Attendance:**

Karl Honkonen	Designee, EOE
Marilyn Contreas	Designee, DHCD
Cynthia Giles	Designee, DEP
Gerard Kennedy	Designee, DAR
Todd Richards	Designee, DFG
Mike Gildesgame	Designee, DCR
Gary Clayton	Public Member

#### **Others in Attendance:**

Linda Marler	DCR
Michele Drury	DCR
Sara Cohen	DCR
Ron Sharpin	DCR
Steve Garabedian	USGS
Vandana Rao	EOEA
Steve Roy	Geosyntec Consultants
Ian Cooke	NepRWA
Ralph Child	Mintz Levin
John McNabb	Cohasset Water Dept.
Tom Keeffe	Tutela Engineering Associates, Inc.
Chad Cox	GZA
Richard Baummer	Erickson Retirement Community

---

#### **Agenda Item #1: Executive Director's Report**

Marler provided an update on the hydrologic conditions:

- Precipitation was well above normal in Massachusetts during the month of September. The state received over seven inches of rain. This was due to tropical storms Frances, Ivan, and Jeanne, which brought significant rainfall events. The water year had been tracking for normal; these storms brought it a bit over the top.
- Ground water levels, statewide, were above normal for the month of September, with the exception of the southeast region, Cape Cod and Islands and a bit of the Connecticut River Valley, but these areas were in the normal range.
- Streamflow in most of Massachusetts was above normal, except for in the southeast where it was in the normal range. The hydrograph illustrates the impacts of the three tropical storm

events. This is a favorable thing to happen in September. It will help with the recharge over winter.

- Water supply reservoir levels are normal to a bit above normal. Many reservoirs are beginning to refill after the summer drawdown, due to these rain events, the fact that evapotranspiration is slowing down, and the end of growing season.
- Fire danger is low.
- The winter weather forecast from NOAA shows that there are equal chances for both temperature and precipitation to be normal, above normal, or below normal, but there are trends. The southeastern part of the country looks like it will be colder than normal and northeast looks like it might be drier than normal. A mild El Niño has the potential to occur this winter.
- There was minor flooding associated with the tropical storms.

Honkonen gave the Executive Director's Report:

- A Water Policy Report for Massachusetts has been drafted. It was posted on the EOE website. We received significant comments from many different interested parties. The final version of this document is scheduled to be published within a month. There will be an event to announce its completion and discuss the implementation of the activities recommended within it. This morning, the WRC met to discuss the implementation plan that has been proposed. Honkonen thanked WRC members for helping to "fine-tune" the information in the water policy document.
- Shrewsbury has notified the Commission that they are delayed in meeting the requirement to abandon the Oak Street Well and the Sewall well. They have let the contract, and it should be completed by November 1<sup>st</sup>. Documentation that the process is complete should be received shortly after Nov 1<sup>st</sup>.
- A series of regional meetings are being held to work with communities with respect to the Water Assets program. The first meeting was held yesterday in Westborough. 50-60 people showed up: water suppliers, town planners, local officials, state representatives and environmental advocates. There are three more of these meetings scheduled.

**Agenda Item #2: Vote – Minutes of January 2003, February 2003, March 2003, and November 2003:**

Clayton moved, seconded by Giles, to approve the meeting minutes of January 2003. The vote was 6 to approve with 1 abstention.

Clayton moved, seconded by Contreas, to approve the meeting minutes of February 2003. The vote was 5 to approve with 2 abstentions.

Clayton moved, seconded by Giles, to approve the meeting minutes of March 2003. The vote was 6 to approve with 1 abstention.

Clayton moved, seconded by Contreas, to approve the meeting minutes of November 2003. The vote was 5 to approve with 2 abstentions.

Clayton suggested that there be a process in place to assure a more timely review and approval of meeting minutes. He is concerned about the open meeting law. The response was that staff are

cognizant of this, but staffing and work load issues have caused the backlog. Once the minutes are up-to-date, it is hoped that we will not again fall so far behind.

**Agenda Item #3: Presentation – Cohasset's Request for a Determination of Insignificance under the Interbasin Transfer Act**

Drury acknowledged the representatives from Cohasset and the Erickson Company. She then distributed some letters of support that had been received. She reminded the Commission that last year they had approved increased demand forecasts for Cohasset to allow the town to serve the Erickson development. The Erickson Retirement Community is located in Hingham, which does not have the capacity to serve the development's long-term water supply needs. This water will only be used for potable purposes. There will be on-site wells for irrigation and wastewater will be discharged on-site through a ground water discharge system. Cohasset's system is in the South Coastal basin and the Erickson development is located in the Weymouth and Weir Rivers subbasin of the Boston Harbor basin.

Marler said that this project is being reviewed for insignificance. The proponent and the environmental agencies have been working on this for about a year and a half. DEP, DFW, NHESP and DMF have been involved. As usual, this is not a simple situation. The proposed transfer is to the Erickson Linden Pond development in the town of Hingham; however, Aquarion Water Co., which serves Hingham does not have adequate supply to meet the future needs of the development. Cohasset will be providing potable water for this development, which is a retirement community. It will have on-site irrigation for outdoor water use. The project was reviewed on the maximum demand of 0.306 mgd to be transferred from Cohasset through the Aquarion water system. Staff is recommending that the WRC find this proposal to be insignificant, based on the criteria for insignificance listed in the regulations:

- (a) That the proposed action to increase over the present rate of interbasin transfer shall not facilitate an increase over one million gallons per day. The proposed transfer less than 1 mgd.*
- (b) That the increase on an annualized basis would be less than one million gallons per day and is to be temporary, of short duration and for a purpose cited in the definition of insignificant increase. This does not apply; it is not a temporary situation.*
- (c) That the additional flow to be withdrawn is in all cases less than five percent (5%) of the instantaneous flow as measured at an appropriate point of the donor river or tributary thereto. This did not directly apply to this situation, but it will be addressed later in this discussion.*
- (d) That the ninety-five percent (95%) exceedance flow, or the 7Q10 flow when relied upon in a program of pollution abatement, will not be diminished. This flow will not be diminished.*
- (e) That special resource values such as endangered species of plants and animals, an area of critical environmental concern, a designated scenic river or area protected by Article 97 of the Amendments to the Massachusetts Constitution will not be adversely affected. Special resource values will not be impacted.*
- (f) The Commission shall consider the cumulative impacts of all past, authorized or proposed transfers on streamflows in the donor basin. Staff did not find cumulative impacts that would be unacceptable.*

Ninety-five percent of Cohasset's water is from surface water sources. In the future, about 5% will be provided by the Ellm's Meadows wellfield, a tubular wellfield over 100 years old, which

is in need of restoration. The reservoir firm yield has been approved by DEP at 5.172 mgd. Cohasset will need a Water Management Act permit, in order to allow for this increase from their system. Marler described the components of the Cohasset water supply system: the Aaron River Reservoir, Lily Pond, which is the withdrawal point, and the control structure at Bound Brook. The watershed for this system is about 9.1 square miles at the Bound Brook control structure. This is an engineered system. The Aaron River Reservoir dam was built in 1976. This dam and the flow control structure at Bound Brook control the releases to the river. There is no USGS gage in this watershed system. The applicant used a data transfer from the Old Swamp River and developed a reservoir model to simulate releases in order to determine how the system could be operated to accommodate these increased withdrawals. The instream flow analysis considered the anadromous fish run in Herring Brook. This fish run was acknowledged in the permitting for this structure, in the 1970's. Fish ladders were required at the dams. At the time, the required release to the river system was 1 cubic foot per second (cfs). This is low, compared to what would be considered to be adequate today. This seems to have been derived by multiplying the 7Q2 flow by 10, and is not something that would be acceptable today. In addition, the 1 cfs release has not been consciously maintained. Certainly there is water flowing through the system, but the releases have not been actively managed. Clayton asked if fish were actively using these fish ladders. Marler replied that downstream of Bound Brook was a poorly functioning fish ladder at Hunters Pond. This limits fish passage to the upper reaches of the watershed. Scituate has a grant to fix this problem, so eventually fish should be able to make it upstream.

Given this engineered situation with respect to the criteria of the act, Staff suggested that Cohasset propose an alternative release schedule that would enhance the instream flow situation at this site. Cohasset developed a plan and staff has accepted this, after consultation with a number of agencies, as adequate to address the criteria. The plan considers water supply needs and helps restore fish passage. It calls for seasonal releases, monitoring for the presence of fish, and monitoring when fish are actively using the system and requires daily flow monitoring and reservoir level monitoring. Spring and fall fish runs consist of four weeks, when fish are spotted to be congregating and are within the stream. The Cohasset Conservation Commission has agreed to assist in monitoring the presence of fish. The operators of the water plant will be looking daily for fish and will provide releases. A release of 6 cfs was requested by DMF for operation of the fish ladders. This flow release will be provided 12 hours per day during migration periods. 2.2 cfs was proposed as adequate for downstream flows when fish were not using the fish ladder. Honkonen asked where and how the flow targets are measured. Marler replied that flow will be measured at the Bound Brook control structure. There are staff gages on the river, which were funded through a Riverways grant. The proposal calls for additional gaging with automated telemetry.

Marler went through the hydrograph scenarios using the proposed flows, existing flows, and Aquatic Base Flows. The project proposal represents a compromise between what Cohasset feels can be tolerated, with respect to water supply needs. All scenarios show natural variability of flows. The proposal shows a benefit to the low end of the flow duration curve. This is an improvement over the existing situation.

Cohasset also submitted a drought management plan as part of this proposal which applies in Cohasset. Linden Ponds will not be using this source for outdoor use. The drought management

plan is similar to State drought management plan. Daily flow and reservoir monitoring will occur throughout the system. It appears that target flows will be met 95% of the time and exceeded 74% of the time. This is important. The system will not be held at a low threshold; it will see a natural range of flows. The proposal increases releases from the inadequate 1 cfs threshold and provides fish ladder flows when the fish need them, maintains natural seasonal variability of flows, increases the low flows and maintains the viability of the public water supply, so Staff felt that this is a good proposal.

Instantaneous flows are difficult to assess in an engineered system such as this, and it is impossible to do a data transfer for this sort of situation. The proposed flow release is a surrogate for this criterion. The 95% exceedance flow is currently 1 cfs. The proposed release is 2.2 cfs. Staff felt that this is an improvement. The proponent was also asked to look at these impacts at the Ellm's Meadow wellfield, a tubular wellfield with a small capacity (0.17 mgd). The wellfield is over 100 yrs old and is in the process of being rehabilitated. Approximately 5% maximum, of the water sold to the Erickson development would be delivered from this source. James Brook flows through this area and is in a culvert for 1500 feet as it passes by the wellfield. This culvert provides hydrologic isolation, so the wellfield will not impact the stream. The wellfield will only be used seasonally, in the summer months.

Staff is recommending that The WRC find this proposal to be insignificant under the Interbasin Act. It improves the existing flow conditions, allows use of fish ladders provides for herring run monitoring, and imposes outdoor water use restrictions to maintain the instream flows.

Drury added that Cohasset had filed a WMA application simultaneously with the ITA request. DEP will be incorporating this proposal and the requirements of the drought plan into the requirements of the WMA permit. She reminded the Commission that if it found the proposal to be insignificant, no conditions were imposed, but in order to assure that the town is withdrawing in accordance with the plan presented here, DEP will be enforcing the proposal through the WMA. This is something Cohasset did not have to do, and they are proposing to make the situation better.

Richards asked if Marine Fisheries would be stocking the ponds. Drury was unaware of this, but suggested that Jack Schwartz be contacted. She added that it was her understanding that some fish were making it upstream, in spite of the problems with the passage at Hunters Pond, but these were not optimal numbers. Richards expressed concern about peaking flows. Changing between 2 cfs and 6 cfs over the course of a day was not optimal. He suggested that an average reasonable daily flow would be more preferable. Richards noted that Old Swamp River has some fish impacts and should not be considered a reference stream. He added that this proposal was not a restoration, but it did represent an improvement.

Clayton referred to the conditions of the 1970's requirement for the 1 cfs release. Was there any monitoring requirements? Marler said that it was contained in a federal EIS and she had not seen any monitoring requirements during her review. Clayton was concerned that the conditions would actually be reflected in the field and asked if there were any types of barriers that would impede monitoring for the presence of fish. Marler answered no, the site is accessible from the street. Clayton asked about the recommendations for the 4-week duration of the flow releases and wanted assurance that the spring migration period would consist of four continuous weeks,

and that the outmigration period was included. Marler confirmed the fish migration periods and said that fish are migrating when flows are naturally high, so the timing should not be a problem. Six cfs is a minimum.

Clayton asked about the likelihood that James Brook at Ellm's wellfield would be daylighted. Cohasset officials said that it was located downtown and there are complicating factors. Therefore there is no real chance for daylighting the brook.

A vote on this application will be requested at the November WRC meeting.

**Agenda Item #4: Presentation – Proposal to Share Water Among Neponset River Basin Communities**

Honkonen introduced Steve Roy, from Geosyntec, and Ian Cooke from the Neponset River Watershed Association (NepRWA). They have been working on a Memorandum of Understanding (MOU) for the water sharing project.

Cooke said that the project was funded as a source water protection project (SWAP) by DEP. Seven communities in upper Neponset watershed are participating: Walpole, Medfield, Foxborough, Sharon, Norwood and the Dedham-Westwood Water District. The project involves emergency water sharing, based on the premise that if water supply sources are in a single town, failure of any infrastructure component could be a big problem. Providing redundancy can be expensive. However, if you look to other communities, the overall water supply is more reliable. The goals are to get multiple municipalities working together to work on this and other issues and to prevent communities from using redundant supplies as primary sources.

The plan has two components: an engineering evaluation of physical interconnections and development of the MOU. Also any movement of water between towns could be considered an interbasin transfer. Gildesgame said that if this was used during an emergency, it would not trigger the Act. Cooke has had discussions with DEP about how this would be addressed under the Water Management Act (WMA). This MOU will not allow any community to pump beyond the limits of the WMA allowable limits. There are still some issues to be resolved about how the new WMA policy will affect this. The primary reason for today's presentation is to get WRC's endorsement. Cooke believes that this sort of short-term emergency water sharing situation does not need ITA review.

Contreas or Giles asked what was the thing that most motivated communities to participate in this MOU. Cooke replied that a member of Walpole Water and Sewer Commission is also a member of the NepRWA board of directors. Walpole has been upgrading and creating redundancy in its infrastructure and he thought it was a sensible thing. Roy added that there had been interest from the water superintendents of the towns. They see the positive side of this. They have been discussing this with town decision makers and the response has been positive. Clayton asked how many of these towns have significant available capacity. Cooke answered that it depended on time of year, but they all have some excess capacity. Roy added that Sharon was the one community which had shortages.

Roy said that the project evaluated water main terminals along town boundaries and locations of existing interconnections. The purpose of the MOU is to codify these existing informal emergency water-sharing arrangements and to get some accountability through metering these interconnections. A lot of communities use hydrant to hydrant connections, which is not reliable. This is sort of a mutual aid pact. The proponents don't want this agreement to violate any existing permits. This supports many elements of the state's new Water Policy. The sharing events will be short term, less than 30 days. Conditions that would trigger the agreement would be system failure, system maintenance, contamination, or any other unforeseen circumstances. Roy stated that he did not think it even meets the trigger for a determination of insignificance under the ITA because the sharing amounts are clearly less than 1 mgd. Roy asked what sorts of conditions or issues are related to the WRC's jurisdiction.

Richards stated that there are several situations in the state where basins are over-allocated. Does this plan enable certain communities to come closer to the maximum allocation? Is Sharon going into an emergency situation in spite of good conservation plans? Cooke answered that Sharon doesn't have adequate supply within town. Richards is concerned that the ability to obtain water from other communities might put off implementing conservation measures. Marler asked what would constitute an emergency to activate those agreements. Roy answered "a short-term reduction of water supply due to system failure, drought, system maintenance or other unforeseen circumstances". Richards commented that drought is the big issue. Cooke answered that it has been clear that no community would give water to another if there is not enough water for their own needs.

Marler is concerned that a community will constantly be facing seasonal water supply shortages, but will continue to build. Under the ITA, she asked, does an emergency need to be a DEP-declared emergency? Drury responded yes, in order to be exempt from the requirements of the ITA, it must be a DEP-declared emergency. Clayton suggested that the language of the MOU be clear that the situation is a DEP-declared emergency. Drury added that there was no threshold for review under the ITA. Any amount of water transferred that is not done under a DEP-declared emergency would need some sort of review. There are no triggers for insignificance. If a transfer occurs under a DEP emergency declaration, it is exempt from the Act. If this water sharing occurs under a DEP emergency declaration, it will not need WRC review. Cooke said that the communities did not want to have to constantly request a DEP emergency declaration, so this agreement is designed to allow for emergencies which do not require a DEP emergency declaration. Clayton asked if there was some mechanism for the Commission to review this and make some decision about a determination of how this proposal fits into the confines of ITA. Drury said it would be necessary to know which communities actually sign on, where their water sources are located, and where their wastewater is discharged. Then, this would need to be discussed with legal staff. Once we have this information, she suggested that the WRC give a determination for this project as a whole, rather requiring individual communities to request a determination. Cooke said that the whole concept is non-specifically defined. He thinks that any movement of water between these towns would be insignificant. Drury responded that this was the Commission's decision. Clayton said there may be a way to sign off on this agreement if it has a time or gallon amount on it. Drury said that she would like to see an "up to" amount in the agreement.

Richards asked how it could be assured that this agreement will benefit the flow and habitat of the Neponset River. Cooke stated that the primary ecological benefit is not having extra recently acquired infrastructure. Giles said that there was an intangible benefit to this – the ability to work across town lines on water issues. Gildesgame asked if the current transfers between communities were tracked. Roy said no, but this proposal will provide a mechanism for this. Giles asked if this would be reported on the Annual Statistical Reports. Cooke said, yes, but they needed to talk to DEP further. Clayton said that this was an unusual, but worthy, proposal. He hopes that there would be some way the WRC could be supportive of this within the context of its regulations. Giles said it was important to show that government can be flexible. Honkonen asked if Staff thought that more analysis was necessary. Gildesgame said he agreed that legal staff needs to be informed and asked for an opinion. Drury said the maximum amounts to be transferred and the communities involved need to be provided before we can determine how to proceed. Clayton said that legal counsel should be made aware that the WRC was supportive of this, so that they can be flexible in their interpretation. Richards asked if there are conservation measures that all communities must abide by. Cooke replied that there is a provision requiring that a recipient town have outdoor water use restrictions as least as strict as those in place in the donor town. Most communities are actively implementing conservation measures.

Cooke asked that the WRC make clear that just because an emergency connection is in place, it does not become a permanent, non-emergency connection in the future. Will the ITA apply if this becomes the case? Drury answered that if the MOU governs the use of the emergency connection, it can be used as a surrogate for capacity. That is why it is important that the MOU state the time frame and “up to” amount. If a community decides to use the connection full time, it represents a change in operating rules and they need to get additional ITA approval.

Honkonen asked that WRC staff review this with legal counsel. Would the Commission need to vote on this as well? Drury answered that if it triggers the Act, a vote will be necessary. Staff would need to see the details of what is being proposed, however, before we could take this to legal counsel.

Meeting adjourned

---

Meeting minutes approved 2/24/05